

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Kie Y. Ahn et al.  
 Title: BIPOLAR TRANSISTORS WITH LOW-RESISTANCE EMITTER CONTACTS  
 Docket No.: 303.466US1  
 Filed: April 29, 1998  
 Examiner: W. David Coleman



Serial No.: 09/069,668  
 Due Date: January 16, 2002  
 Group Art Unit: 2823

Commissioner for Patents  
 Washington, D.C. 20231

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We are transmitting herewith the following attached items (as indicated with an "X"):

- ☒ A return postcard.
- ☒ An Amendment and Response (6 Pages).
- ☒ A check in the amount of \$84.00 to cover the fee for additional claims as calculated below.
- ☒ A Clean Version of Pending Claims (7 pgs.).

If an additional fee is required due to changes to the claims, the fee has been calculated as follows:

CLAIMS AS AMENDED						
	(1) Claims Remaining After Amendment		(2) Highest Number Previously Paid For	(3) Present Extra	Rate	Fee
TOTAL CLAIMS	35	-	38		x 18 =	\$0.00
INDEPENDENT CLAIMS	12	-	11	1	x 84 =	\$84.00
[ ] MULTIPLE DEPENDENT CLAIMS PRESENTED						\$0.00
TOTAL						\$84.00

Please consider this a PETITION FOR EXTENSION OF TIME for sufficient number of months to enter these papers and please charge any additional required fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
 P.O. Box 2938, Minneapolis, MN 55402 (612-373-6900)

By:   
 Atty: Eduardo E. Drake  
 Reg. No. 40,594

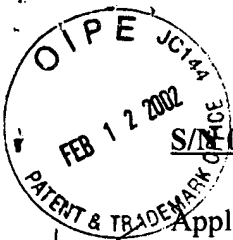
**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on this 14 day of January, 2002.

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S/N 09/069,668

PATENT

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Examiner: W. David Coleman

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**AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111**

Commissioner for Patents  
Washington, D.C. 20231

02/15/2002 HWRZ11 00000025 09069668

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Applicant has reviewed the Office Action mailed on October 16, 2001. Please amend the above-identified patent application as follows.

**IN THE CLAIMS**

Please cancel claim 39 without prejudice or disclaimer, and substitute the claim set in the appendix entitled Clean Version of Pending Claims for the previously pending claim set. The substitute claim set is intended to reflect cancellation of claim 39, and amendment of previously pending claims 4, 5, and 34. The specific amendments to individual claims are detailed in the following marked up set of claims.

4. (Amended) [The method of claim 1] A method of making an emitter contact for an emitter region of a bipolar transistor, the method comprising:  
forming a polysilicon structure over an emitter region position of a semiconductor substrate, the substrate having a surface at the emitter region position, wherein  
forming the polysilicon structure on an emitter region position comprising  
forming a diffusion barrier layer; and  
forming a polysilicon layer on the diffusion barrier layer; and  
cross-diffusing metal and at least a portion of the polysilicon structure to produce a metal emitter contact entirely above the surface of the substrate at the emitter region position.
5. (Amended) [The method of claim 4] A method of making an emitter contact for an emitter region of a bipolar transistor, the method comprising:

112, 2nd  
No antecedent basis

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